

Appl. No. 10/603,339  
Amdt. dated June 29, 2006  
Reply to Office Action of April 19, 2006

PATENT

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

Claims 1.-17. (Canceled).

Claim 18. (Original) A dispenser assembly comprising:

a dispenser chip including a dispenser body including a vertical channel; and  
a sample chip having a base and a sample structure, the sample structure  
comprising a pillar and a sample surface, wherein the vertical channel of the dispenser chip is  
cooperatively structured to receive the pillar.

Claim 19. (Original) The dispenser assembly of claim 19 further comprising:  
a seal member between the dispenser body and the base of the sample chip.

Claims 20-37. (Canceled).

Claim 38. (Original) A microfluidic chip comprising:

a body having a bottom surface; and  
a plurality of vertical channels in the body, wherein each opening is cooperatively  
structured to receive a pillar of a sample chip.

Claim 39. (Original) The microfluidic chip of claim 38 wherein the body further  
comprises:

a plurality of horizontal delivery channels in communication with the plurality of  
vertical channels.

Claim 40. (Original) The microfluidic chip of claim 38 wherein the body further  
comprises:

a plurality of reservoirs upstream of the plurality of vertical fluid channels.

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Claim 41. (Original) The microfluidic chip of claim 38 the body comprises silicon, glass, or polymeric materials.

Claim 42. (Original) The microfluidic chip of claim 38 wherein surfaces of the body forming each vertical channel are hydrophobic.

Claim 43. (Original) The microfluidic chip of claim 38 wherein surfaces of the body forming each vertical channel are hydrophilic.

Claims 44.-55. (Canceled)

Claim 56. (Previously Presented) The dispenser assembly of claim 18 wherein the sample chip comprises silicon.

Claim 57. (Previously Presented) The dispenser assembly of claim 18 wherein the sample chip further comprises a capture agent on the sample surface.

Claim 58. (Previously Presented) The dispenser assembly of claim 18 wherein the dispenser body comprises silicon.

Claim 59. (Previously Presented) The dispenser assembly of claim 18 wherein the sample chip further comprises a capture agent on the sample surface, and wherein an analyte is present in the vertical channel in the dispenser chip.

Claim 60. (Previously Presented) The dispenser assembly of claim 18 wherein the sample chip comprises more than 100 pillars.

Claim 61. (Previously Presented) The dispenser assembly of claim 18 wherein the pillar has an aspect ratio greater than about 1.